

Addressing Transportation Construction Workforce Needs Through Innovative Policies and Practices

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Tom O'Brien, PhD Ben Olson Devin Martinez Flores

Introduction

In California alone, there are 1,536 bridges and over 14,220 miles of highway in poor condition, but improvements to critical transportation infrastructure are impossible without the workforce to complete them. The nation is facing a critical shortage of construction workers, and the shortage becomes increasingly apparent as more funds become available. For example, the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), authorized \$1.2 trillion for transportation and infrastructure spending with \$550 billion of that specifically set aside for new investments and programs. Of the \$1.2 trillion dollars, only \$125 billion has been spent with an additional \$89 billion allocated to the Inflation Reduction and CHIPS Act. Despite available funds, projects are not being completed at a higher rate because of the workforce shortage. This research explores how the agricultural, technology, and healthcare economic sectors have combated their own labor shortages as well as their use of visa-based employment.

Study Methods

The findings in this project are from a literature review of current sources and informal interviews with stakeholders of the three economic sectors of interest (agriculture, tech, and healthcare). Causes and solutions of labor shortages in each of the economic sectors were investigated, with particular focus on the impact of changes in policies and processes. Research databases and search engines were used to look for reports and current articles on workforce shortages. Reports describing the issues within each economic sector required their information be supported by at least two other reports. The issues were categorized into groups of awareness, recruitment, and retention. The report uses the three categories to explain the issues in each economic sector and what solutions are being implemented.

Findings

The major finding is that there simply are not enough workers. The literature review and interviews reveal that all the economic sectors explored in this study have some level of workforce shortage. The short- and long-term solutions that these economic sectors have implemented to address the shortage fall under the broad categories of raising awareness, recruitment, and retention. Of the solutions implemented by each industry, some of them are too niche to be applied outside of their industry, but some of the solutions can be applied generically across all industries facing a labor shortage. For instance, solutions such as implementing higher wages and establishing talent pipelines can increase the overall labor force regardless of sector. Each sector has explored the possibility of visa-based solutions alongside other solutions.

Of the three industries, only the agricultural sector currently has their own visa while the others share one system. Regardless, visa systems are cumbersome, requiring a significant allocation of resources on the side of the employer and can only serve as a temporary solution since there is no path to citizenship inherently built in. For example, the H-1B program employed by the tech sector requires a bachelor's degree or its equivalent and much of the paperwork and burden of the program is placed on the employer to sponsor an individual that they wish to have work for them.

In general, there are few studies available on the workforce shortage within the industries examined here, but of the three industries, the healthcare shortage was predicted earliest and had the most time to collect data. Therefore, the solutions the healthcare industry has employed to address the shortage are more comprehensive when compared to the other industries. Their solutions include hiring temporary workers and funneling funding into education pipelines.

Some lessons can be gleaned from these industries and applied to transportation, especially regarding the importance of incentives and increasing awareness.

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Policy Recommendations

Overall, the solutions most applicable to highway construction come from healthcare. Taking lessons from this industry shows that highway construction skills can be taught at trade schools and training programs by experienced workers. Because experienced workers must have all the skills necessary to transfer their knowledge and be willing to take a cut in pay, subsidized incentives can be put in place to recruit more instructors to prevent a shortage on the supply side. Some of these solutions are in place as “[construction] firms have raised pay rates [and] 45 percent are providing incentives and bonuses and a quarter of firms (24 percent) have also improved their benefits packages.” Additional incentives could include reduced-cost training programs in exchange for working in areas with shortages or for a company for some period. Some companies have implemented employee-sponsored training that is to be completed prior to hiring as well. Short- and long-term solutions need to be implemented to ensure the industry can fill roles essential to highway construction and other critical needs

About the Authors

Dr. Thomas O’Brien is the Associate Dean of the College of Professional and Continuing Education (CPaCE) at California State University, Long Beach (CSULB) and the Deputy Director of Long Beach Programs for the METRANS Transportation Consortium, a partnership of CSULB and the University of Southern California. Dr. O’Brien has a Master’s degree in Urban Planning and Development and a Ph.D. in Policy, Planning, and Development from the University of Southern California. He is both an Eno and Eisenhower Transportation Fellow.

Ben Olson is the Center Operations Manager at the Center for International Trade and Transportation (CITT) at CSULB. Ben manages the center’s GIS projects and research responsibilities. Ben received his Master’s in Geographic Information Science from CSULB and a Bachelor’s in Statistics and Spanish from the University of Illinois, Urbana-Champaign (UIUC).

Devin Martinez-Flores is a Research Associate at CITT. Devin has worked on projects focused on reducing truck congestion through Intelligent Transportation Systems and workforce development toolkits. Devin received his Bachelor’s in Business Economics from CSULB.

To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/research/2332



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